

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1-8 (cancelled).

9 (currently amended). A mobile terminal comprising:

a movable cover;

transceiver components operable to transmit and receive communication signals;

a processing platform operable to control the transceiver components and to determine when the movable cover is in a first position and a second position; and

an antenna system connected to the transceiver components, the antenna system further comprising a radiating element ~~connected to a switchable matching arrangement and a switch~~ which is responsive to the processing platform to ~~switch the antenna system into a first matched condition~~ connect the transceiver components to the radiating element at a first feed point to achieve one of a first matched condition and a second matched condition when the movable cover is in the first position, and at a second feed point to achieve the other of the first matched condition and the second matched condition ~~into a second matched condition~~ when the movable cover is in the second position.

10-13 (cancelled).

14 (currently amended). The mobile terminal of claim 9 wherein the radiating element can be extended and collapsed, and wherein:

the first matched condition and the second matched condition are achieved when the radiating element is one of extended and collapsed; and

~~the switchable matching arrangement~~ is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and

the radiating element is another of extended and collapsed, and into a fourth matched condition when the movable cover is in the second position and the radiating element is the other of extended and collapsed.

15 (currently amended). The mobile terminal of claim 9 wherein:

the first matched condition and the second matched condition are achieved when the mobile terminal is in one of a transmit mode and a receive mode; and

the ~~switchable matching arrangement~~ is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and the mobile terminal is in the other of the transmit mode and the receive mode, and into a fourth matched condition when the movable cover is in the second position and the mobile terminal is in the other of the transmit mode and the receive mode.

16 (currently amended). The mobile terminal of claim 9 wherein:

the first matched condition and the second matched condition are achieved when the mobile terminal is operating in one frequency band; and

the ~~switchable matching arrangement~~ is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and the mobile terminal is operating in another frequency band, and into a fourth matched condition when the movable cover is in the second position and the mobile terminal is operating in the other frequency band.

17 (currently amended). A method of operating a mobile terminal having a movable cover, the method comprising:

determining a position of the movable cover, wherein the movable cover is movable between at least a first position and a second position;

switching a radiating element of an antenna system ~~comprising a radiating element into~~ to a first feed point to achieve a first matching condition for the antenna system when the movable cover is in the first position;

switching the radiating element of the antenna system ~~into~~ to a second feed point
to achieve a second matching condition when the movable cover is in the second
position; and
engaging in telecommunication signaling through the antenna system.

18 (currently amended). The method of claim 17 wherein the ~~switching of the antenna system into~~ achievement of the first matching condition and the second matching condition are accomplished when the radiating element is in one of an extended state and a collapsed state, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the radiating element is in ~~[[a]]~~ another of the extended state and the collapsed state; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the radiating element is in the other of the extended state and the collapsed state.

19 (currently amended). The method of claim 17 wherein the ~~switching of the antenna system into~~ achievement of the first matching condition and the second matching condition are accomplished when the mobile terminal is operating in one of a transmit mode and a receive mode, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in the other of the transmit mode and the receive mode; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other of the transmit mode and the receive mode.

20 (currently amended). The method of claim 17 wherein the ~~switching of the antenna system into~~ achievement of the first matching condition and the second matching condition are

accomplished when the mobile terminal is operating one frequency band, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in another frequency band; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other frequency band.

21 (currently amended). A mobile terminal comprising:

a movable cover movable between at least a first position and a second position;

an antenna system comprising a radiating element;

means for determining a position of the movable cover;

means for switching the radiating element antenna system into to a first feed point to achieve a first matching condition for the antenna system when the movable cover is in the first position;

means for switching the radiating element antenna system into to a second feed point to achieve a second matching condition for the antenna system when the movable cover is in the second position; and

means for engaging in telecommunication signaling through the antenna system.

22 (currently amended). The mobile terminal of claim 21 further comprising:

means for determining when the radiating element is in an extended state and a collapsed state;

means for switching the antenna system into the first matching condition and the second matching condition when the radiating element is in one of the extended state and the collapsed state;

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the radiating element is in [[a]] another of the extended state and the collapsed state; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the radiating element is in the other of the extended state and the collapsed state.

23 (original). The mobile terminal of claim 21 further comprising:

means for switching the antenna system into the first matching condition and the second matching condition when the mobile terminal is in one of a transmit mode and a receive mode;

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is in the other of the transmit mode and the receive mode; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is in the other of the transmit mode and the receive mode.

24 (original). The mobile terminal of claim 21 further comprising:

means for switching the antenna system into the first matching condition and the second matching condition when the mobile terminal is operating on one frequency band;

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating on another frequency band; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating on the other frequency band.

25 (new). A mobile terminal comprising:

a movable cover;

transceiver components operable to transmit and receive communication signals;

a processing platform operable to control the transceiver components and to determine when the movable cover is in a first position and a second position; and

an antenna system connected to the transceiver components, the antenna system further comprising a radiating element and a switch which is responsive to the processing platform to ground the radiating element to achieve a planar, inverted-F response for the antenna system when the movable cover is in the first position, and to disconnect ground from the radiating element to achieve a monopole response for the antenna system when the movable cover is in the second position.

26 (new). The mobile terminal of claim 25 wherein the radiating element can be extended and collapsed, and wherein:

a first matched condition and a second matched condition are achieved based on the inverted-F and monopole responses when the radiating element is one of extended and collapsed; and

the switch is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and the radiating element is another of extended and collapsed, and into a fourth matched condition when the movable cover is in the second position and the radiating element is the other of extended and collapsed.

27 (new). The mobile terminal of claim 25 wherein:

a first matched condition and a second matched condition are achieved based on the inverted-F and monopole responses when the mobile terminal is in one of a transmit mode and a receive mode; and

the switch is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and the mobile terminal is in the other of the transmit mode and the receive mode, and into a fourth matched condition when the movable cover is in the second position and the mobile terminal is in the other of the transmit mode and the receive mode.

28 (new). The mobile terminal of claim 25 wherein:

a first matched condition and a second matched condition are achieved based on the inverted-F and monopole responses when the mobile terminal is operating in one frequency band; and

the switch is further operable to switch the antenna system into a third matched condition when the movable cover is in the first position and the mobile terminal is operating in another frequency band, and into a fourth matched condition when the movable cover is in the second position and the mobile terminal is operating in the other frequency band.

29 (new). A method of operating a mobile terminal having a movable cover, the method comprising:

determining a position of the movable cover, wherein the movable cover is movable between at least a first position and a second position;

connecting a ground to a radiating element of an antenna system to produce an inverted-F response for the antenna system when the movable cover is in the first position;

disconnecting the ground from the radiating element of the antenna system to produce an monopole response for the antenna system when the movable cover is in the second position; and

engaging in telecommunication signaling through the antenna system.

30 (new). The method of claim 29 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the radiating element is in one of an extended state and a collapsed state, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the radiating element is in another of the extended state and the collapsed state; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the radiating element is in the other of the extended state and the collapsed state.

31 (new). The method of claim 29 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the mobile terminal is operating in one of a transmit mode and a receive mode, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in the other of the transmit mode and the receive mode; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other of the transmit mode and the receive mode.

32 (new). The method of claim 29 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the mobile terminal is operating one frequency band, and further comprising:

switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in another frequency band; and

switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other frequency band.

33 (new). A mobile terminal comprising:

a movable cover movable between at least a first position and a second position;

an antenna system comprising a radiating element;

means for determining a position of the movable cover;

means for connecting a ground to a radiating element of an antenna system to produce an inverted-F response for the antenna system when the movable cover is in the first position;

means for disconnecting the ground from the radiating element of the antenna system to produce an monopole response for the antenna system when the movable cover is in the second position; and

means for engaging in telecommunication signaling through the antenna system.

34 (new). The mobile terminal of claim 33 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the radiating element is in one of an extended state and a collapsed state, and further comprising:

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the radiating element is in another of the extended state and the collapsed state; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the radiating element is in the other of the extended state and the collapsed state.

35 (new). The mobile terminal of claim 33 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the mobile terminal is operating in one of a transmit mode and a receive mode, and further comprising:

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in the other of the transmit mode and the receive mode; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other of the transmit mode and the receive mode.

36 (new). The mobile terminal of claim 33 wherein the inverted-F and monopole responses correspond to a first matching condition and a second matching condition when the mobile terminal is operating one frequency band, and further comprising:

means for switching the antenna system into a third matching condition when the movable cover is in the first position and the mobile terminal is operating in another frequency band; and

means for switching the antenna system into a fourth matching condition when the movable cover is in the second position and the mobile terminal is operating in the other frequency band.